

WHAT IS CLAIMED IS:

1. A real-time information receiving apparatus for receiving real-time information transferred via an asynchronous packet network, comprising:

a packet receiving unit for receiving a real-time information packet which is transmitted at a constant coding speed, while having a constant packet length;

a jitter absorbing buffer for temporarily storing therein the real-time information packet received by said packet receiving unit;

a decoding unit for decoding data stored in said jitter absorbing buffer; packet number judging means for measuring a total number of packets stored in said jitter absorbing buffer and for comparing said measured total packet number with a preset threshold value, and also for notifying the comparison result to data discarding means; and

data discarding means for discarding either a portion or all of the packets stored in said jitter absorbing buffer based upon the comparison result of said packet number comparing means.

2. A real-time information receiving apparatus for receiving real-time information transferred via an asynchronous packet network, comprising:

a packet receiving unit for receiving a real-time information packet which is transmitted at a constant coding speed, while having a constant packet length;

a jitter absorbing buffer for temporarily storing therein the real-time information packet received by said packet receiving unit;

a decoding unit for decoding data stored in said jitter absorbing buffer;

packet number judging means for measuring a total number of packets stored in said jitter absorbing buffer and for comparing said measured total packet number with a preset threshold value, and also for notifying the comparison result to a continuation monitoring timer; and

5 a continuation monitoring timer for judging as to whether or not such a time period during which said comparison result of said packet number judging means exceeds a threshold value is continued over a predetermined threshold value, and for notifying such a fact that said time period is continued over said predetermined threshold value to data discarding means; and

10 data discarding means for discarding either a portion or all of the packets stored in said jitter absorbing buffer based upon the comparison result of said continuation monitoring timer.

3. A real-time information receiving apparatus for receiving real-time  
15 information transferred via an asynchronous packet network, comprising:

a packet receiving unit for receiving a real-time information packet which is transmitted at a constant coding speed, while having a constant packet length;

20 a jitter absorbing buffer for temporarily storing therein the real-time information packet received by said packet receiving unit;

a decoding unit for decoding data stored in said jitter absorbing buffer;

a reception packet counter for counting a total number of real-time information packets received by said packet receiving unit after a communication is commenced;

25 comparing means for comparing said total packet number counted by

said reception packet counter with a predetermined threshold value; and

data discarding means for discarding either a portion or all of the packets stored in said jitter absorbing buffer based upon the comparison result of said comparing means, which is acquired at a time instant when a predetermined time period has elapsed after the communication has been commenced.

4. A real-time information receiving apparatus as claimed in claim 3 wherein:

said real-time information receiving apparatus is further comprised of:

a timer for outputting a time-up signal after a predetermined time period has passed from a time instant when a first packet is received, or said data is decoded for the first time since the communication has been commenced; and

said data discarding means discards either a portion or all of the packets stored in said jitter absorbing buffer based upon the comparison result of said comparing means when said time-up signal is outputted.

5. A real-time information receiving apparatus as claimed in any one of the preceding claims 1 to 4 wherein:

said data discarding means discards either a portion or all of the packets stored in said jitter absorbing buffer in the unit of a packet.

6. A real-time information receiving apparatus as claimed in any one of the preceding claims 1 to 4 wherein:

said data discarding means discards either a portion or all of the packets

stored in said jitter absorbing buffer in the unit of a byte.

7, A real-time information receiving apparatus as claimed in claim 6 wherein:

5 the data discarded by said data discarding means corresponds to such data which may give a small adverse influence to a transmission quality when being discarded.

10 8, A real-time information receiving apparatus as claimed in claim 7 wherein:

said real-time information packet corresponds to a voice packet; and  
said data discarding unit is comprised of:

a non-voice portion detecting unit for detecting a non-voice portion of  
voice information stored in said jitter absorbing buffer; and  
15 a discarding unit for discarding either a portion or all of said detected non-voice portions; and said data discarding means discards only the detected non-voice portion when the data discarding operation is carried out.

20 9. A real-time information receiving apparatus as claimed in claim 9 wherein:

said non-voice portion detecting unit notifies information as to such a non-voice portion which should be discarded within said detected non-voice portions to said discarding unit; and

said discarding unit discards only said notified non-voice portion.

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10. A real-time information receiving apparatus as claimed in claim 9 wherein:

said non-voice portion detecting unit divides said detected non-voice portion by using a block having a preselected fixed length as a dividing unit,  
5 and notifies such a block except for a head block thereof and a tail block thereof as said block which should be discarded to said discarding unit.

11. A real-time information receiving apparatus as claimed in any one of the preceding claims 1 to 4 and claims 7 to 10 wherein:

10 said data discarding means is comprised of:

a discarding unit for discarding either a portion or all of the data stored in said jitter absorbing buffer; and

a dummy data producing/inserting unit for producing such dummy data having a smaller data amount than an amount of said data to be discarded, and  
15 for inserting said produced dummy data into said jitter absorbing buffer; and

said data discarding means inserts said dummy data instead of the data to be discarded when the data stored in said jitter absorbing buffer is discarded.

12. A real-time information receiving apparatus as claimed in any one of the preceding claims 1 to 4 and claims 7 to 10 wherein:

said data discarding means is comprised of:

a discarding unit for discarding either a portion or all of the data stored in said jitter absorbing buffer; and

a discard judging unit for judging as to whether or not an amount of data  
25 stored in said jitter absorbing buffer after the data is discarded becomes

smaller than a predetermined threshold value before the data discarding operation is actually carried out; and

said data discarding means does not execute the data discarding operation in such a case that said data amount of the jitter absorbing buffer  
5 becomes smaller than the threshold value.

13. A real-time information receiving apparatus as claimed in any one of the preceding claims 1 to 4 and 7 to 10 wherein:

said data discarding means is comprised of:

10 a discarding unit for discarding either a portion or all of the data stored in said jitter absorbing buffer; and

a discard judging unit for judging as to whether or not an amount of data stored in said jitter absorbing buffer after the data is discarded becomes smaller than a predetermined threshold value before the data discarding  
15 operation is actually carried out; and

said data discarding means executes the data discarding operation in such a case that said data amount of the jitter absorbing buffer does not become smaller than the threshold value; and also discards only such a data amount that a data amount left in said jitter absorbing buffer is made equal to a  
20 threshold value in such a case that since there are large numbers of data to be discarded, if all of said data to be discarded are discarded, then a data amount of said jitter absorbing buffer becomes smaller than the threshold value.